



State of Utah

Department of  
Natural Resources

Division of  
Oil, Gas & Mining

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February 24, 2004

CERTIFIED RETURN RECEIPT  
7099 3400 0016 8896 3021

Russell Larsen  
Lakeview Rock Products  
P. O. Box 540700  
900 North Redwood Road  
North Salt Lake, Utah 84054-0700

Re: Initial Review of Notice of Intention to Commence Large Mining Operations; Lakeview Rock Products, Inc.; Beck Street Quarry; M/035/020, Salt Lake County; Utah

Dear Mr. Larson:

The Division has completed our review of your draft Notice of Intention to Commence Large Mining Operations for the Lakeview Quarry, located in Salt Lake County, Utah, which was received January 14, 2004. After reviewing the information, the Division has the following comments that will need to be addressed before tentative approval may be granted.

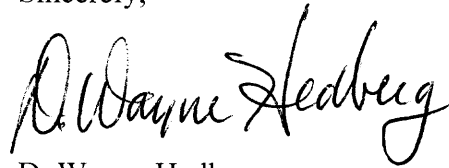
The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion. **Please address only those items requested in the attached technical review. You may send replacement pages of the original mining notice using redline and strikeout text, so we can see what changes have been made. After the notice is determined technically complete and we are prepared to issue final approval, we will ask that you send us two copies of the complete and corrected plan. Upon final approval of the permit, we will return one copy stamped "approved" for your records. Please provide a response to this review by March 31, 2004.**

The Division will suspend further review of the Lakeview Quarry Notice of Intention until your response to this letter is received. If you have any questions in this regard please contact me, Tom Munson, Paul Baker or Doug

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Jensen of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

A handwritten signature in black ink, reading "D. Wayne Hedberg". The signature is written in a cursive style with a large, prominent "H".

D. Wayne Hedberg  
Permit Supervisor  
Minerals Regulatory Program

jb  
Attachment: Review  
cc: JBR Environmental Consultants  
Lynn Pace, Salt Lake City Corporation  
O:\M035-SaltLake\M0350020-Lakeview\draft\01212004rev.doc

## **REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS**

**Lakeview Rock Products, Inc.  
Lakeview Quarry**

**M/035/020**

The introduction of the plan says, "As needed, other binding agreements such as the Development Agreement will be renegotiated after the large mining permit has been obtained." The Development Agreement with Salt Lake City Corporation should be renegotiated in conjunction with the large mining permit (LMO).

Any changes in the plan that may be required by the city will need to be incorporated into Lakeview's LMO and the reclamation surety. (DJ)

### **R647-4-105 - Maps, Drawings & Photographs**

#### ***105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)***

Cross-sections should be included showing the quarry after mining and following final reclamation contouring. The plan should contain at least one north-south section, and 2 or 3 east-west sections. (DJ)

### **R647-4-106 - Operation Plan**

#### ***106.4 Nature of materials mined, waste and estimated tonnages***

Figure 4 shows the final pit contours. The highwall on the southern property line cannot be completed as shown. The contour assumes that Staker's final pit contours will match the highwall configuration shown in the plan. A review of Staker's final pit plan should be made before Lakeview's ultimate highwall contours in this area are finalized. Lakeview's final pit contours in this area will have to be adjusted to, at a minimum, conform to Staker's final highwall projections. (DJ)

#### ***106.5 Existing soil types, location, amount***

The application indicates the entire site has been disturbed and that all the soils have been stripped. The Division is aware of an area on the east side of the property where there are piles of what appears to be soil that was stripped from adjacent areas. These soils should be quantified and protected, and the location needs to be shown on one of the maps. In addition, the Division highly recommends that signs be placed on these stockpiles so they are not used as product or fill. (PBB)

The operator intends to build a berm above the highwall. What material will be used to construct this berm? Is there any soil available to be salvaged in the area where the berms will be placed? (PBB)

The plan needs to identify what soil could be used to reclaim the pad to the premining land uses of wildlife habitat and grazing. Although the operator intends to create an industrial site, there needs to be a plan—and bond—to reclaim the entire area to the premining land use in case the alternative land use cannot be achieved. In addition to the soils to the east of the quarry, are there any other soils available? What substitute soils might be used for reclaiming the pit floor? Could any of the material in the pad be used as a soil? The sand and gravel that is normally sold as product is probably relatively inert, but it should be possible to use it as a growth medium if it is amended with organic matter. (PBB)

Whether or not it is possible to develop the site to an industrial use, there is a buffer area near the highwall that will need to be revegetated and will need soil. (The operator commits in Section 7.2 to revegetate the setback area.) Additionally, the highwall benches should be revegetated as much as possible, and the plan will need to identify what materials could be used as a growth medium in this area. (See additional discussion about reclamation of highwall benches in Section 107.6, Concurrent Reclamation.) (PBB)

**106.6 *Plan for protecting & redepositing soils***

The plan indicates all soils have been stripped during previous mining operations and that there is no remaining topsoil. As discussed above, there is some soil available, and this soil needs to be identified and protected. In addition, substitute soils to be used, or those that could potentially be used for reclamation, should be identified both in the plan and at the site. These soils need to be protected from contamination and compaction. (PBB)

The plan also needs to discuss how soils will be deposited and what soil amendments or other treatments will be needed. Depending on the soils available for reclamation, it may be necessary to add organic matter in the form of composted biosolids or manure. (PBB)

**106.7 *Existing vegetation - species and amount***

The plan contains qualitative information about plant species present in the area and the potential vegetation community, but there is no quantitative information. It is required to have enough vegetation information to establish revegetation success standards. Although much of the site has been disturbed, there are adjacent undisturbed areas where it should be possible to gather this data. (PBB)

**106.8 *Depth to groundwater, extent of overburden, geology***

Please provide the necessary locations on a map of the water rights locations described in the plan and the locations where water chemistry of the groundwater was sampled as described on page 14 and 15 of the plan. (TM)

**106.9 *Location & size of ore, waste, tailings, ponds***

Please provide more detailed discussion of the drainage on the existing property, showing the location of current ponds and the routing of surface water. The plan states that surface water is not a problem. The plan also states that neither sediment or storm water will leave the property. No surface water runoff calculations for the runoff from storm events have been provided. Please show the contributing watersheds and calculate the surface water runoff from the 100 year-6 hour event. Please show a general site drainage plan to help the Division clearly see the routing of storm water. It is also unclear how this will change over time, as the property is developed. How will the drainage primarily from the one unnamed drainage be handled in the construction of the final benches and pads? (TM)

**R647-4-107 - Operation Practices**

**107.2 *Drainages to minimize damage***

The final pit limit map shows how the highwalls will be laid out. The issues that need to be discussed and shown on the appropriate figures are drainage down the highwall face and how best to handle drainage during and following operation. On Page 13 of the NOI, it states "The Pit floor currently slopes toward the east, and would continue to do so under the final reclamation condition." This would tend to create a ponding situation and contradicts the statement that drainage will fan out to aid in revegetation. What actually is going to occur? (TM)

**107.3 *Erosion control & sediment control***

It seems prudent that a buffer zone be left between the highwall and the proposed final pad area, whatever its use. A pond or several ponds could be incorporated into this designs, rather than let the water run where it might go, unless there is a better reason for this method other than aiding in revegetation. The best location for those ponds would be at the outlet to the drainages. Please place these features on the Final Pit Plan map. (TM)

**107.6 *Concurrent reclamation***

The highwall benches will be accessible as they are mined, but they will become inaccessible as the mine progresses to lower levels. Before the mine proceeds beyond each bench of the final highwall, the operator will build a berm near the edge of each bench, and at this time, it would be possible to apply any available

soil or substitute soil and to seed the benches. Revegetation of this sort would not be able to wait until final reclamation; it would need to be done concurrently with the mining operation. Although fall is the best time to seed, the Division recognizes that this might not always be possible in seeding the benches. In spite of this, the limited or possibly non-existent soils, and the limited amount of vegetation that would probably become established on the benches, efforts should be made to seed the benches. If for no other reason, establishing some vegetation in these areas would limit the number of weeds, particularly noxious weeds that would grow on the benches. (PBB)

#### **R647-4-109 - Impact Assessment**

##### ***109.1 Impacts to surface & groundwater systems***

The plan mentions several wells in the area, please show the locations of these wells on a map. Also provide from other sources (USGS, etc.) that documents the shallow aquifer's characteristics. The Division needs to know that Lakeview is not having a direct impact on this aquifer and if this aquifer has a beneficial use, ground water designation, according to the State's Division of Water Quality. Please provide evidence of your groundwater protection permit, or if you do not have one, please contact the Department of Environmental Quality, Division of Water Quality, groundwater section, (801-538-6146) to determine if one is required. (TM)

In addition to the ground water protection permit, the operator must demonstrate application for, or provide evidence of a Storm Water Pollution Prevention Plan and include this in the permit. A copy must also be available on site. If there is any surface water point source discharge from the mine site, a UPDES permit will be needed. UPDES permits are obtained from the State Department of Environmental Quality, Division of Water Quality, surface water section. (TM)

##### ***109.4 Slope stability, erosion control, air quality, safety***

Section 6.4.1 of the plan says that final highwall (60 degree) slopes "are expected to remain stable."

The plan also states, "Since the design highwall may be reached some 50 years in the future, it is appropriate for engineering review of the geologic rock quality to be done on a regular schedule to confirm or adjust the physical properties on which the stability analyses were based."

In order for the Division to approve leaving a highwall at angles greater than 45 degrees, stability of this feature needs to be demonstrated. The plan does not contain any documentation concerning the competency of the material that will

form the final highwall. Until stability can be demonstrated an overall slope angle of 45 degrees should be used for the final highwall configuration. (DJ)

Section 6.4.2 states, "During final reclamation the pit floor area would be slightly manipulated by grading to maximize the spreading of water across this area, but prevent it from draining westward off the property."

For reclamation plans and bond calculation purposes, what constitutes a "slight manipulation" of the pit floor? (DJ)

This section also states that catch basins would also be located at the base of the highwall along the eastern edge of the pit floor.

Design criteria should be included in the plan for the construction of these basins and the surety adjusted for the cost of the construction of these features. (DJ)

These basins should be of sufficient size and depth to contain rock fall from the ultimate highwall. (DJ)

No data is contained in the plan documenting the impacts, to the pit floor, of rocks falling from a highwall of >1000 feet. This data will be needed in order to review sufficiency of the design of the catch basins. (DJ)

The location of the catch basins should be shown on the Final Pit Plan map. (DJ)

Costs for the construction of these features should be included in the surety. (DJ)

#### ***109.5 Actions to mitigate any impacts***

Section 6.5 states that as residential development east of the pit occurs, a different fence is needed to restrict highwall access.

The property east of the quarry is presently zoned residential and development of this area is a high probability. The surety should be adjusted for the construction of this fence. (DJ)

The property that abuts the quarry on the northeast is also privately owned; improved fencing should be considered in this area also. (DJ)

### **R647-4-110 - Reclamation Plan**

#### ***110.1 Current & post mining land use***

Section 7.1 of the plan states the Lake Bonneville Shore Line Trail has been proposed for the area east of Lakeview's quarry.

During our meetings with Salt Lake City Corporation, we were informed that this property, owned by the City of North Salt Lake, has been proposed for light residential. (DJ)

The plan identifies the premining land uses as wildlife habitat and grazing, although the area has been used for mining in recent times. The plan needs to contain two reclamation options:

1. **Premining land use.** The plan needs to show full reclamation and revegetation to the premining land uses of grazing and wildlife habitat, and the operator needs to maintain a reclamation bond adequate for the Division to reclaim the site to these uses if it becomes necessary. Although it is unlikely this plan would be used, it needs to be included. There are some areas of the mine, such as the buffer zone next to the highwall and on the highwall benches, where grazing and wildlife habitat would be the postmining land use. (PBB)

2. **Light industrial postmining land use.** The land use section of the plan says the proposed postmining land use on the pit floor would be light industrial, but that the area may also be used to improve the transportation corridor through the area. This appears to be a legitimate use, but the Division cannot grant final approval to such a proposal without lease agreements, evidence that the land use meets zoning requirements, letters of intent, etc. These will probably not be in place until just before the mine ceases operations. In the meantime, the Division needs to maintain a bond sufficient to restore the entire site to the premining land use. The plan for final reclamation to an industrial site does not need to include every detail, but it does need to show how the site will be prepared so it is suitable for this use. (PBB)

#### ***110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed***

Section 7.2 says all on-site access roads utilized during production will be within the final pit limit and that they will be eliminated as production progresses. Figure 4 shows a section of road leading from the south to the upper portion of the quarry, and it indicates this road will not be reclaimed. From the maps, it appears this road has been used to access upper portions of the quarry. Unless this road has a legitimate postmining land use, it needs to be reclaimed. (PBB)

#### ***110.5 Revegetation planting program***

The plan needs to include a complete revegetation plan. Although the plan may not be used for most of the site, areas that will definitely need to be revegetated

include the safety berm above the highwall, the buffer zone at the base of the highwall, and, as much as possible, the highwall benches. This revegetation plan also needs to be included in case development to a light industrial site is not possible. (PBB)

Elements of the revegetation plan that need to be included are

1. A plan to deposit and amend soils.
2. A surface preparation plan. There must be an uncompacted rooting zone at least two feet deep. The surface should also be left in a roughened condition.
3. A seeding plan which includes a seed mix, seed application methods, and timing of seeding. A few introduced species might be necessary, but they should be avoided. The site should be seeded as soon after surface preparation as possible, particularly if the seed is broadcast. Seeding should only be done in the fall, about October through November. (PBB)

#### **R647-4-112 - Variance**

**Highwall.** The plan states a variance is requested, under R647-4-111, to allowing highwalls to remain at an angle  $>60$  degrees. The justification is because the highwalls are located within an overall setting of similar highwalls with relative stability.

This variance cannot be granted until data is supplied to the Division documenting the geologic horizon that will form the final highwall. A geologic engineering study documenting the stability of this material that will form this final highwall is needed before this variance can be granted. (DJ)

**Topsoil.** The operator requests a variance from topsoil redistribution requirements because topsoil is not available in the areas to be newly disturbed. The Division is willing to grant this variance if there are truly no soils available, but as discussed elsewhere in this review, there are some soils that it appears could be salvaged and used for reclamation. The operator needs to determine how much of this material can be used and also needs to decide what substitute material can be used in those areas where soil is not available, but where revegetation is required. (PBB)

**Revegetation.** Because the proposed postmining land use is light industrial and because the areas proposed for disturbance are essentially not vegetated at the present time, the operator requests a variance from revegetation requirements. Revegetation is required for the berms above the highwalls and in the buffer between the highwall and any areas of the pit developed for industrial use. A revegetation plan and bond are needed for the

entire pad areas, but revegetation will not be required if the site is actually developed to an industrial use. While the Division is requiring that the highwall benches be prepared and seeded, it is not likely this area will achieve the revegetation success standard. It will also be nearly impossible for anyone to go back to these areas and measure the vegetation cover. For these reasons, the variance can be given for revegetation success of the highwall benches. The success standard will be met once these areas are properly prepared and seeded. (PBB)

#### **R647-4-113 – Surety**

##### ***Section 9.1 – Gates & Signs***

Because of the projected residential development of the area east of the highwall, additional signs need to be purchased and placed on the fence between the development and the quarry highwall.

Costs for the installation of the “different fence” proposed in the plan should be included in the surety estimate. (DJ)

##### ***Section 9.2 – Pit Floor Regrading***

A description of the amount of work that will be required to do minimal grading of the pit floor and equipment to be used is needed to understand the cost shown in this category. (DJ)

The surety should be adjusted to reflect the cost of spreading growth medium over the pit floor and placement of material on the benches. Ripping of these areas after the placement of the growth medium should also be included. (DJ)

##### ***Section 9.3 – Safety Berms***

The estimate indicates approximately 3700 cubic yards of material will be needed to construct berms above the highwalls.

Please indicate where the material to be used in this construction will come from. Does this total include material that will be utilized to construct berms on the benches as well? (DJ)

##### ***Section 9.4 – Clean-up***

The surety calculation reflects the cost of the removal of equipment from the site. The equipment shown in the estimate constitutes the removal of one of the crusher strings from the site.

Figure 3 (Facility Map) indicates that two crusher strings are presently located on the site and the plan states that the development at the site is “anticipated to continue much as it is currently”.

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The surety should be adjusted to account for the removal of the second crusher string. Loader rental time and supervision should also be adjusted to reflect this additional work. (DJ)

***Section 9.5- Revegetation***

The surety should be adjusted to reflect the cost of revegetation of the pit floor, benches, safety berms (both the berm on top and those berms established where each bench daylights towards property owned by others), and areas of the catch basins. (DJ)